(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



. PER BERTA DEN BERTA DE BERTA B

(43) International Publication Date 21 October 2004 (21,10,2004)

PCT

(10) International Publication Number WO 2004/090937 A2

(51) International Patent Classification7:

H01L

(21) International Application Number:

PCT/IL2004/000310

(22) International Filing Date:

4 April 2004 (04.04.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/461,437

10 April 2003 (10.04.2003)

(71) Applicant (for all designated States except US): TECHNION RESEARCH & DEVELOPMENT FOUNDATION LTD [IL/IL]; Senate House, Technion City, 32000 Haifa (IL).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): EIN-ELI, Yair [IL/IL]; 9 Amnon VeTamar Street, 34791 Haifa (IL). STAROSVETSKY, David [IL/IL]; 16 Jordan Street, 20692 Yokneam Ilit (IL). ABELEV, Esta [IL/IL]; 25/35 Pinchas Sapir Street, 29000 Kiryat Yam (IL). RABKIN, Eugene [IL/IL]; 1 Kadish Luz Street, 32159 Haifa (IL).
- (74) Agent: G.E. EHRLICH (1995) LTD.; 11 Menachem Begin Street, 52521 Ramat Gan (IL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COPPER CMP SLURRY COMPOSITION

(57) Abstract: A composition that rapidly passivates copper-containing surface to yield a uniform layer of insoluble copper oxide, the composition being useful in chemical-mechanical planarization of copper-containing surfaces is disclosed. The composition is a solution having a pH of equal to or greater than 9 and having an oxidation potential sufficient to oxidize the surface to form non-soluble copper oxides. Also disclosed are methods of making and using the composition.